



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/621,149

07/15/2003

James L. Kroening

450.366US1

1189

7590 03/18/2009  
Gateway, Inc.  
Attention: Scott Charles Richardson  
610 Gateway Drive, MD Y-04  
N. Sioux City, SD 57049

EXAMINER

TRAN, DENISE

ART UNIT

PAPER NUMBER

2188

MAIL DATE

DELIVERY MODE

03/18/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/621,149	<b>Applicant(s)</b> KROENING, JAMES L.	
	<b>Examiner</b> Denise Tran	<b>Art Unit</b> 2188	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,9,11-14,16,17,19,30-33 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,4,5,9,11-14,16,17,19,33,35-37 is/are allowed.
- 6) ☒ Claim(s) 30-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/29/08 and 09/30/08 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date: _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____.   | 6) <input type="checkbox"/> Other: _____.                                   |

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/29/08 has been entered.

2. The applicant's amendment filed 12/29/08 has been considered. Claims 1, 4-5, 9, 11-14, 16-17, 19, 30-33, and 35-37 are presented for examination. Claims 2-3, 6-8, 10, 15, 18, and 20-29, 34 have been canceled.

3. The drawings are objected to because the detailed descriptions of figs. 4-6 are not disclosed. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, claim 14, an address spread within the dual write command;" claim 30, "the information to be read contains a header designating a dual write operation"; claim 32, "dual write command is hard drive firmware command;" claim 37, "additionally comprising providing a reserve area on the , must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

Art Unit: 2188

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The objection is maintained because the new Figure 4 does not include all the elements mentioned in the objection in the previous Office Action.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by Paterson et al., U.S. Patent No. 6,412, 042.

As per claim 30, Paterson teaches a method of writing information to a storage device, the method, implemented in the storage device comprising:

receiving a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20 );

determining two locations to write the information (e.g., col. 11, line 60 to col. 12, line 20);

performing a single reading of the information to be written into a read buffer  
(e.g., col.11, line 60 to col. 12, line 20 );

writing the information to both of the two locations based on the single reading of  
the information (e.g., col. 11, line 60 to col. 12, line 20 );

wherein the read buffer is not cleared between the writing of the information to  
both of the two locations (e.g., col. 11, line 60 to col. 12, line 20 ); and

wherein the information to be read contains a header designating a dual write  
operation (i.e., a write command is a header of data segment, e.g., fig. 12, el. 140; col.  
11, line 60 to col. 12, line 20 or i.e., identifier of the data segment is a header of data  
segment, fig. 6B, col. 7, lines 5-15, col. 7, lines 25-45).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for  
all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over  
Paterson et al., US 6,412,042 (hereinafter Paterson), and further in view of Cheston et  
al. US patent No. 6,167,494 (hereinafter Cheston).

As per claim 31, Paterson teaches a method of writing information, the method  
implemented in the storage device comprising:

receiving a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20 );

determining two locations to write the information (e.g., col. 11, line 60 to col. 12, line 20);

performing a single reading of the information to be written into a read buffer (e.g., col.11, line 60 to col. 12, line 20 );

writing the information to both of the two locations based on the single reading of the information (e.g., col. 11, line 60 to col. 12, line 20 ); and

wherein the information to be read contains a header designating a dual write operation (i.e., a write command is a header of data segment, e.g., fig. 12, el. 140; col. 11, line 60 to col. 12, line 20 or i.e., identifier of the data segment is a header of data segment, fig. 6B, col. 7, lines 5-15, col. 7, lines 25-45). Paterson does not explicitly show the two locations are determined based upon a percentage of a read size of the storage device. Cheston shows the two locations are determined based upon a percentage of a read size of a storage device (e.g., col. 5, lines 25-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Cheston into the method of Paterson because it would increasing data reliability by recovery data from a reserve area.

9. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paterson et al., US 6,412,042 (hereinafter Paterson), and further in view of Assaf, US patent No. 5,966,732 (hereinafter Assaf).

Art Unit: 2188

As per claim 32, Paterson teaches a method of writing information to a storage device, the method, implemented in the storage device comprising:

receiving a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20 );

determining two locations to write the information (e.g., col. 11, line 60 to col. 12, line 20);

performing a single reading of the information to be written into a read buffer (e.g., col.11, line 60 to col. 12, line 20 );

writing the information to both of the two locations based on the single reading of the information (e.g., col. 11, line 60 to col. 12, line 20 );

wherein the read buffer of the storage device is not cleared between the writing of the information to both of the two locations (e.g., col. 11, line 60 to col. 12, line 20 );

wherein one of the two locations is within a reserve area of the storage device (i.e., one of the two area stored for future use, e.g., col. 11, line 60 to col. 12, line 20); and

wherein the reserve area is a protected area that is protected from access by a host command (i.e., one of two areas is protected from retrieve data by host command until the other one has an error e.g., col. 11, lines 15-25; col. 18, lines 25-65 and et seq.) and a user is inherently taught by Paterson, col. 11, lines 15-25 because a host command or instruction is generated by a user or a host is controlled by a user; and Paterson does not explicitly show wherein the dual write command is a hard drive firmware command. Assaf shows a command is a hard drive firmware command (e.g.,



Art Unit: 2188

col. 3, lines 15-20; col. 5, lines 20-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Assaf into the method of Paterson because it would provide an easy in updating firmware comparing to hardware.

10. Claims 1, 4-5,9, 11-14, 16-17, 19, 33,35-37 are allowable over the prior art of record.

11. Applicant's arguments filed 12/29/08 have been fully considered but they are not persuasive.

12. In the remarks, the applicant argued that Paterson does not teach "dual write operation" designated by a header of the information to be read as required by claim 30 and a dual write command contained in a header of the information to be read.

The examiner disagreed with the applicant's argument. Paterson teaches a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20 ) and wherein the information to be read contains a header designating a dual write operation (i.e., a write command is a header of data segment, e.g., fig. 12, el. 140; col. 11, line 60 to col. 12, line 20 or i.e., identifier of the data segment is a header of data segment, fig. 6B, col. 7, lines 5-15, col. 7, lines 25-45).

In further discussion, Peterson, fig. 12, el. 140; col. 11, line 60 to col. 12, line 20, teaches a dual write command (i.e., a command causing write information to two

Art Unit: 2188

locations or two writes) is an information to be read to identify as a read or write request wherein the write request is a dual write operation; and teaches a data segment is the information to be read. In addition, the cited portions teaches the dual write command is a head control information or a header of the information to be read. Thus, Paterson teaches "dual write operation" is designated by a header of the information to be read as required by claim 30 and a dual write command is contained in a header of the information to be read.

Also, Peterson, fig. 6B, col. 7, lines 5-15, col. 7, lines 25-45, teaches the information to be read containing a header (i.e., identifier of data segment) designating a dual write operation (dual write addresses).

13. In the remarks, the applicant argued that "the separateness of these steps, and this would lead one of ordinary skill in the art to believe that the header with the write command is not a part of the data transfer. It is therefore one of ordinary skill in the art would not recognize that 'the information to be read contains a header designating a dual write operation' in Paterson," applicant's amendment filed 12/29/08 page 11.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., these steps are not separated) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Peterson show what in the claim is Paterson teaches a method of

Art Unit: 2188

writing information to a storage device, the method, implemented in the storage device comprising:

receiving a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20);

determining two locations to write the information (e.g., col. 11, line 60 to col. 12, line 20);

performing a single reading of the information to be written into a read buffer (e.g., col.11, line 60 to col. 12, line 20);

writing the information to both of the two locations based on the single reading of the information (e.g., col. 11, line 60 to col. 12, line 20);

wherein the read buffer is not cleared between the writing of the information to both of the two locations (e.g., col. 11, line 60 to col. 12, line 20); and

wherein the information to be read contains a header designating a dual write operation (i.e., a write command is a header of data segment, e.g., fig. 12, el. 140; col. 11, line 60 to col. 12, line 20 or i.e., identifier of the data segment is a header of data segment, fig. 6B, col. 7, lines 5-15, col. 7, lines 25-45).

Nowhere in the claims recited that these steps are not separated, and this would lead one of ordinary skill in the art to believe that the header with the write command is a part of the information to be read. It is therefore one of ordinary skill in the art would recognize that "the information to be read contains a header designating a dual write operation" in Paterson.

In further discussion, Peterson, fig. 12, el. 140; col. 11, line 60 to col. 12, line 20, teaches a dual write command (i.e., a command causing write information to two locations or two writes) is an information to be read to identify as a read or write request wherein the write request is a dual write operation; and teaches a data segment is the information to be read. In addition, the cited portions teaches the dual write command is a head control information or a header of the information to be read. Thus, Paterson teaches "dual write operation" is designated by a header of the information to be read as required by claim 30 and a dual write command is contained in a header of the information to be read.

Also, Peterson, fig. 6B, col. 7, lines 5-15, col. 7, lines 25-45, teaches the information to be read containing a header (i.e., identifier of data segment) designating a dual write operation (dual write addresses).

14. In the remarks, the applicant argued that the cited portions of the Assaf patent fail to teach or suggest this requirement of claim 31.

The examiner disagreed with the applicant argument. The examiner did not use the cited portions of the Assaf patent to teach or suggest the requirement of claim 31. In particular, as per claim 31, Paterson teaches a method of writing information, the method implemented in the storage device comprising:

receiving a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20);

determining two locations to write the information (e.g., col. 11, line 60 to col. 12, line 20);

performing a single reading of the information to be written into a read buffer (e.g., col.11, line 60 to col. 12, line 20);

writing the information to both of the two locations based on the single reading of the information (e.g., col. 11, line 60 to col. 12, line 20); and

wherein the information to be read contains a header designating a dual write operation (i.e., a write command is a header of data segment, e.g., fig. 12, el. 140; col. 11, line 60 to col. 12, line 20 or i.e., identifier of the data segment is a header of data segment, fig. 6B, col. 7, lines 5-15, col. 7, lines 25-45). Paterson does not explicitly show the two locations are determined based upon a percentage of a read size of the storage device. Cheston shows the two locations are determined based upon a percentage of a read size of a storage device (e.g., col. 5, lines 25-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Cheston into the method of Paterson because it would increasing data reliability by recovery data from a reserve area.

15. In the remarks, the applicant argued that Assaf does not disclose that a dual write command can or should be implemented as a command in the firmware of a hard drive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, the combination of Paterson and Assaf teaches a dual write command can or should be implemented as a command in the firmware of a hard drive. In particular, Paterson teaches a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20 ) and col. 8, lines 15-20, "the ROM 84 stores program instructions . . . to perform processes of the present invention" . Paterson does not explicitly show wherein the dual write command is a hard drive firmware command. Assaf shows a command is a hard drive firmware command (e.g., col. 3, lines 15-20; col. 5, lines 20-30) wherein "[Firmware] consists of microprograms that are contained in ROM." It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Assaf into the method of Paterson because it would provide an easy in updating firmware comparing to hardware.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise Tran whose telephone number is (571) 272-4189. The examiner can normally be reached on Monday, Thursday, and an alternated Friday.

Art Unit: 2188

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sough Hyung, can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Denise Tran/

Primary Examiner, Art Unit 2188